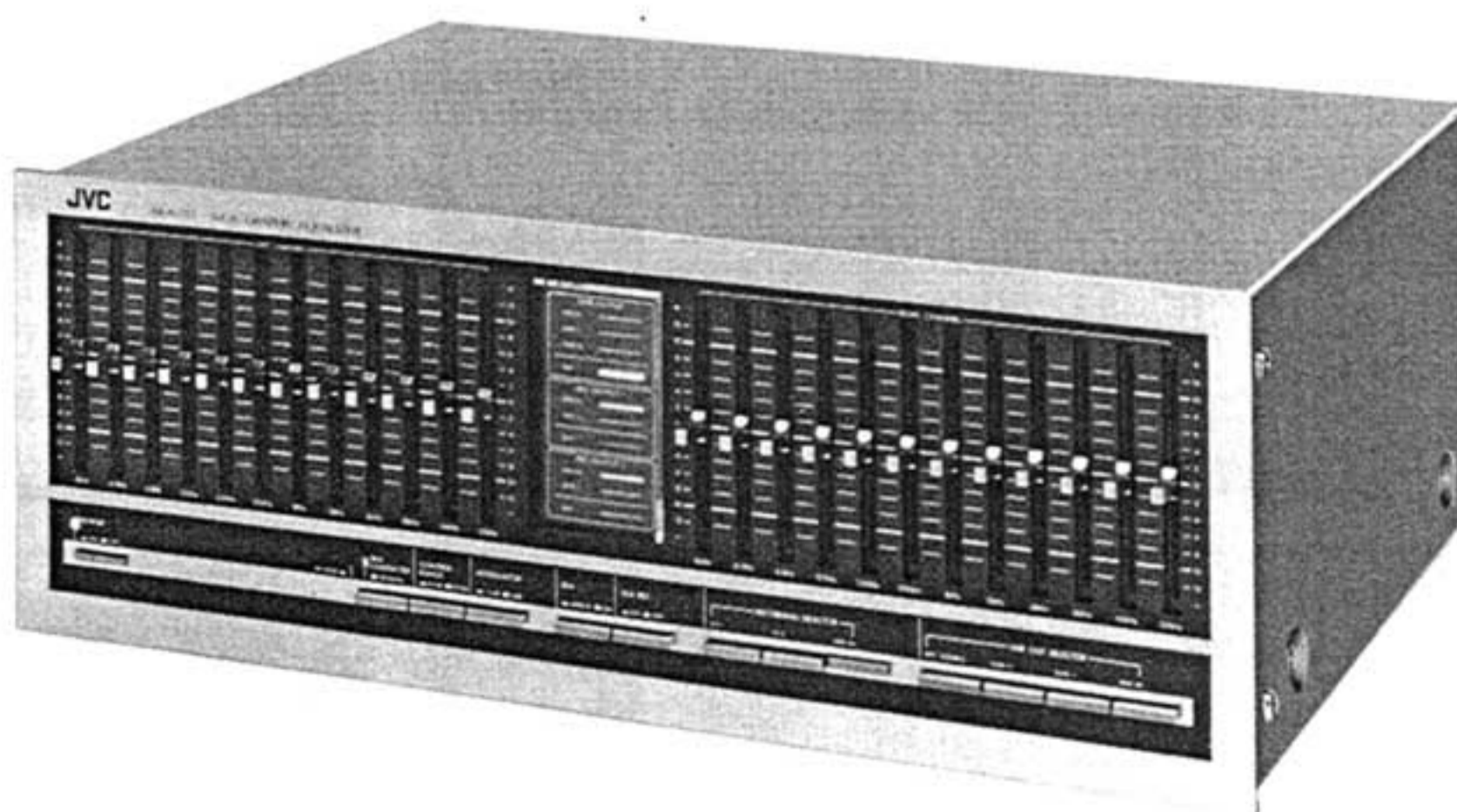


JVC

SERVICE MANUAL

MODEL
SEA-70

S.E.A. GRAPHIC EQUALIZER



No.2527
APR. 1980

Contents

1. Specifications	1	8-(3) TXX-277 AC Socket & Fuse P.C. Board Ass'y	10
2. Removal Procedure of Top Cover	2	8-(4) TAC-515 Power Supply & S.E.A. Amp. P.C. Board Ass'y	11
3. Main Parts Location		9. Accessories List	13
3-(1) Top View	2	10. Packing Materials	13
3-(2) Front View	3	11. Parts List with Specified Numbers for Designated Areas	13
3-(3) Rear View	3	12. SEA-70 Schematic Diagram	14
4. Exploded View	4	13. Connection Diagram	16
5. Block Diagram	5		
6. Service Precaution	5		
7. Adjustment Procedures			
7-(1) Center Voltage Adjustment	6		
7-(2) Gain Adjustment	6		
8. Printed Circuit Board Ass'y and Parts List			
8-(1) TXX-259 Functions Switch & Pin-jack P.C. Board Ass'y	7		
8-(2) TXX-260 S.E.A. Resonator P.C. Board Ass'y	9		

Warning:
When placing the parts marked with \triangle , be sure to use the designated parts to ensure safety.

1. Specifications

Circuitry

Buffer amplifier : FET-equipped, ICL-input, double differential, equiphase-feedback circuit.

S.E.A. amplifier : Double-differential input, DC configuration circuit.

Semiconductor-L circuit : Transistor-Inductor circuit.

Input Section

SEA INPUT : Input impedance 47 k-ohms

TAPE MONI : Input impedance 47 k-ohms

Output section

SEA OUTPUT : Output impedance 100-ohms

TAPE REC : Output impedance 100-ohms (during SEA-recording)

Rated output : 2 V RMS (with all S.E.A. controls positioned at "0")

Max. output : 8 V RMS (with all S.E.A. controls positioned at "0")

Total harmonic distortion : 0.003 % (20 Hz – 20 kHz, rated output)

Intermodulation distortion : 0.003 % (with all S.E.A. controls positioned at "0")

Gain : 10 – 100,000 Hz (+0, -2 dB)

S/N ratio : 118 dB (at rated output, IHF A-network short-circuited)

Control section

SEA center frequencies : 16 Hz, 31.5 Hz, 63 Hz, 125 Hz, 250 Hz, 500 Hz, 1 kHz, 2 kHz, 4 kHz, 8 kHz, 16 kHz, 32 kHz

SEA control range : ± 12 dB/ ± 6 dB

General

Power source : See attached table

Dimensions : 420(W) x 159(H) x 318(D) mm

Weight : 6 kg

Power Specifications

	CANADA & USA	EUROPE, U.K. & AUSTRALIA	MILITARY MARKET & OTHER AREA
Power Supply	AC 120 V \sim , 50/60 Hz	AC 110/120/220/240 V \sim selectable, 50 Hz	AC 110/120/220/240 V \sim selectable, 50/60 Hz
Power Consumption	25 W	25 W	25 W
Power Outlet	Fitted	Not fitted	Fitted
Fuse (Primary) (F001)	QMF61U1-R50 (0.5 A)	QMF51A2-R315L (T315 mA)	QMF51A2-R315L (T315 mA)

2. Removal Procedure of Top Cover

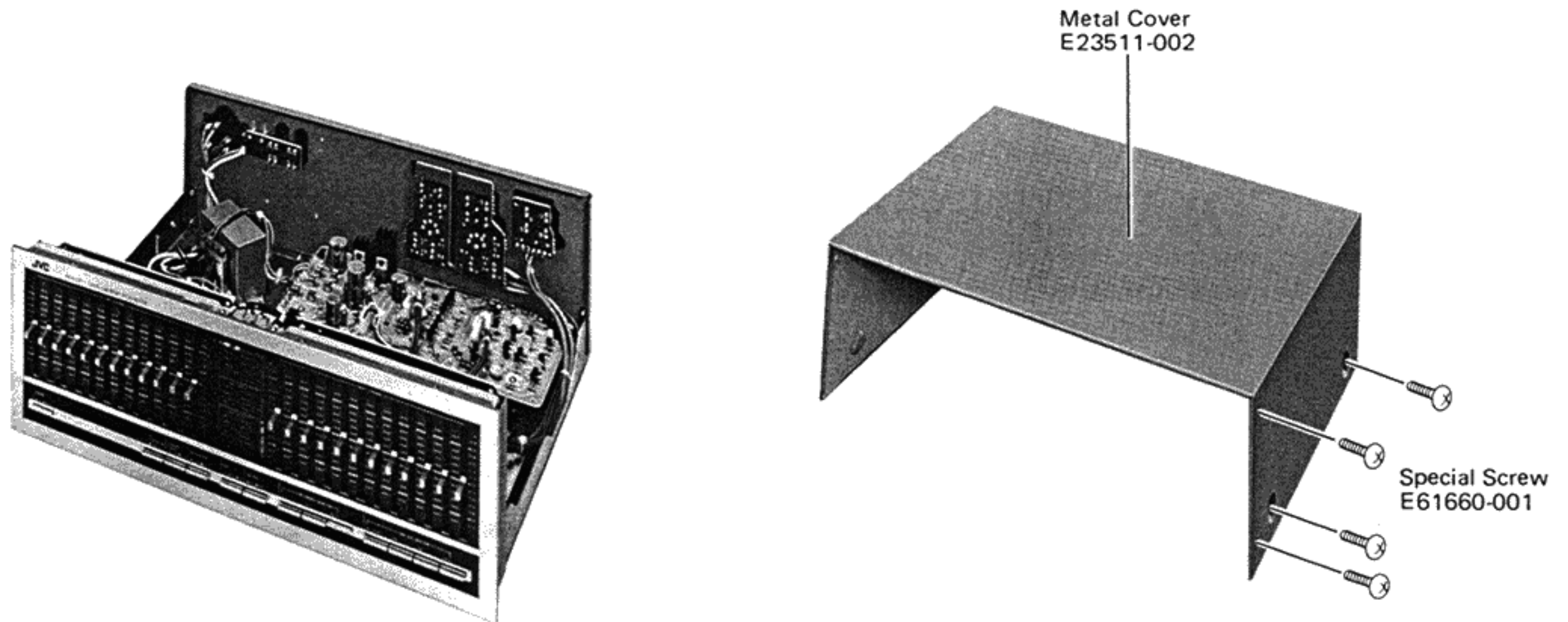


Fig. 1

3. Main Parts Location

3-(1) Top View

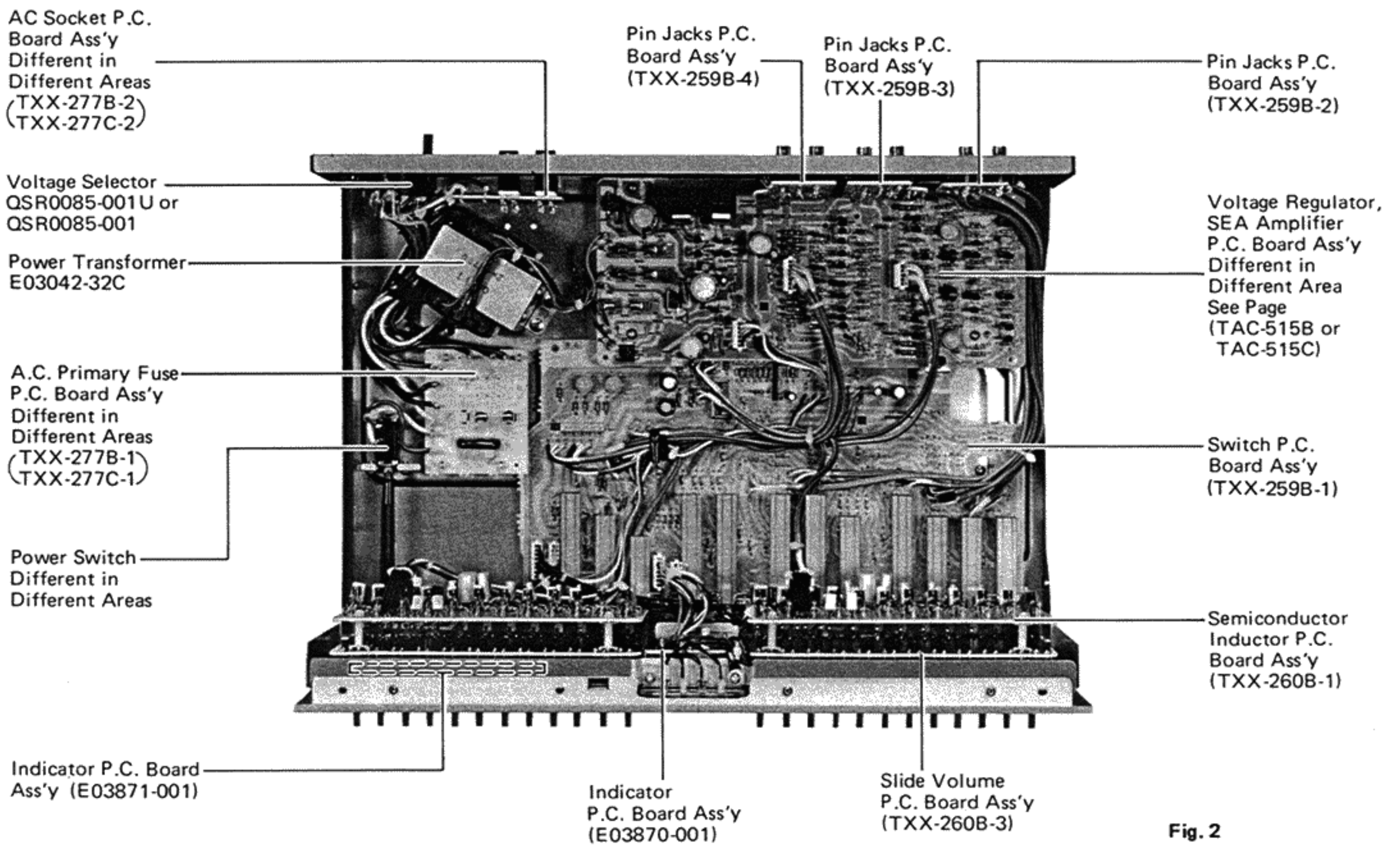


Fig. 2

3-(2) Front View

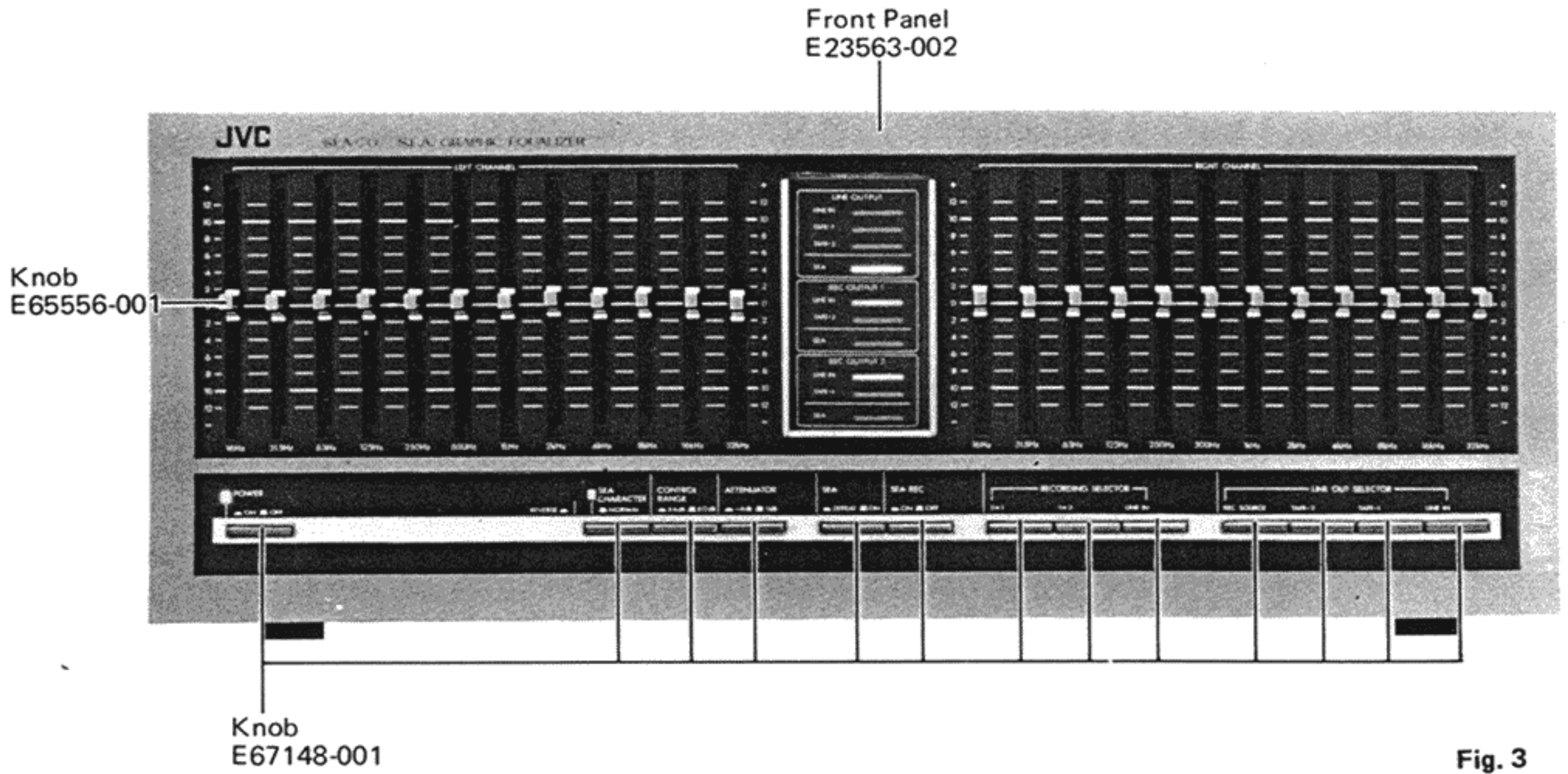


Fig. 3

3-(3) Rear View

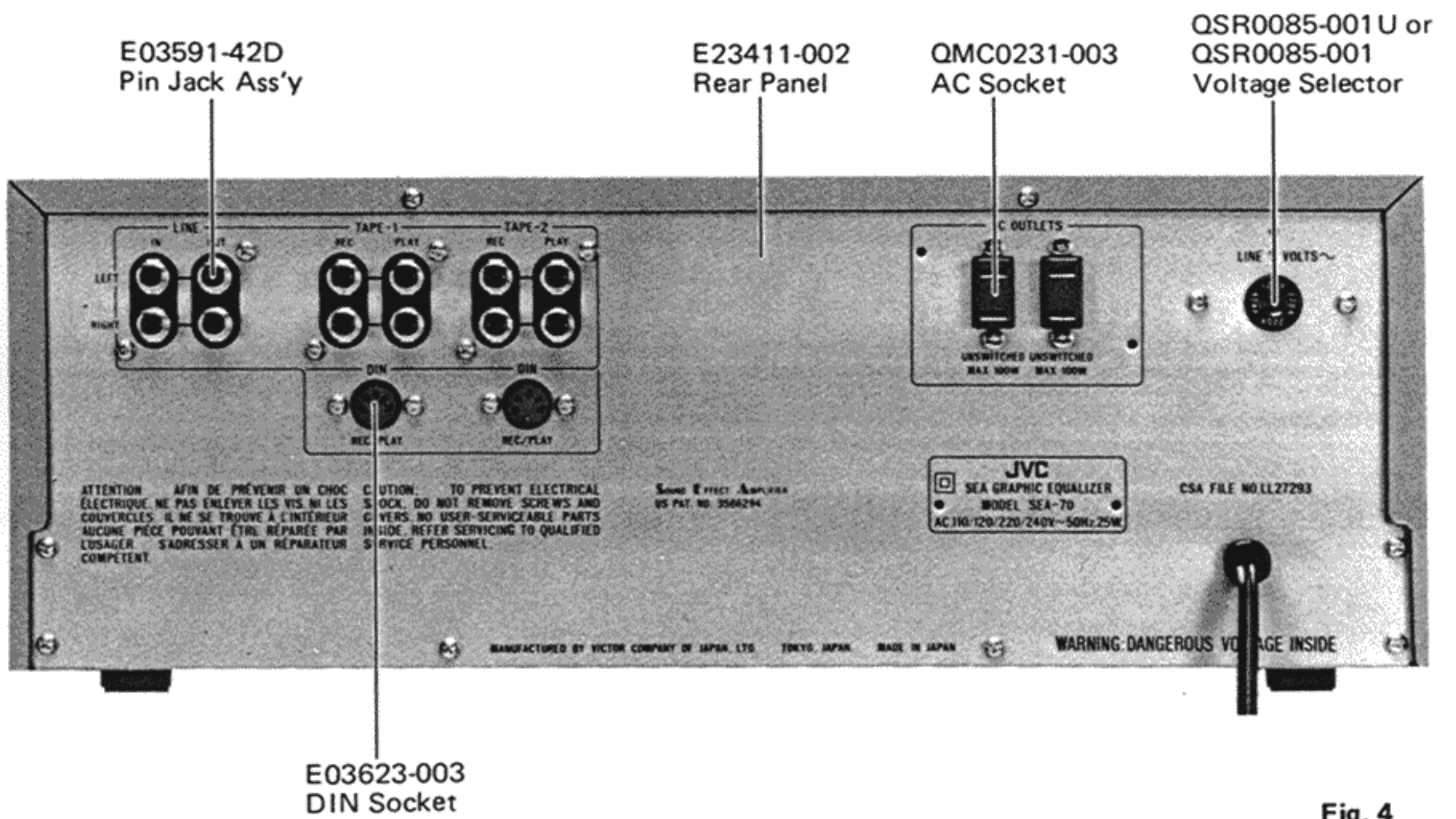


Fig. 4

5. Block Diagram

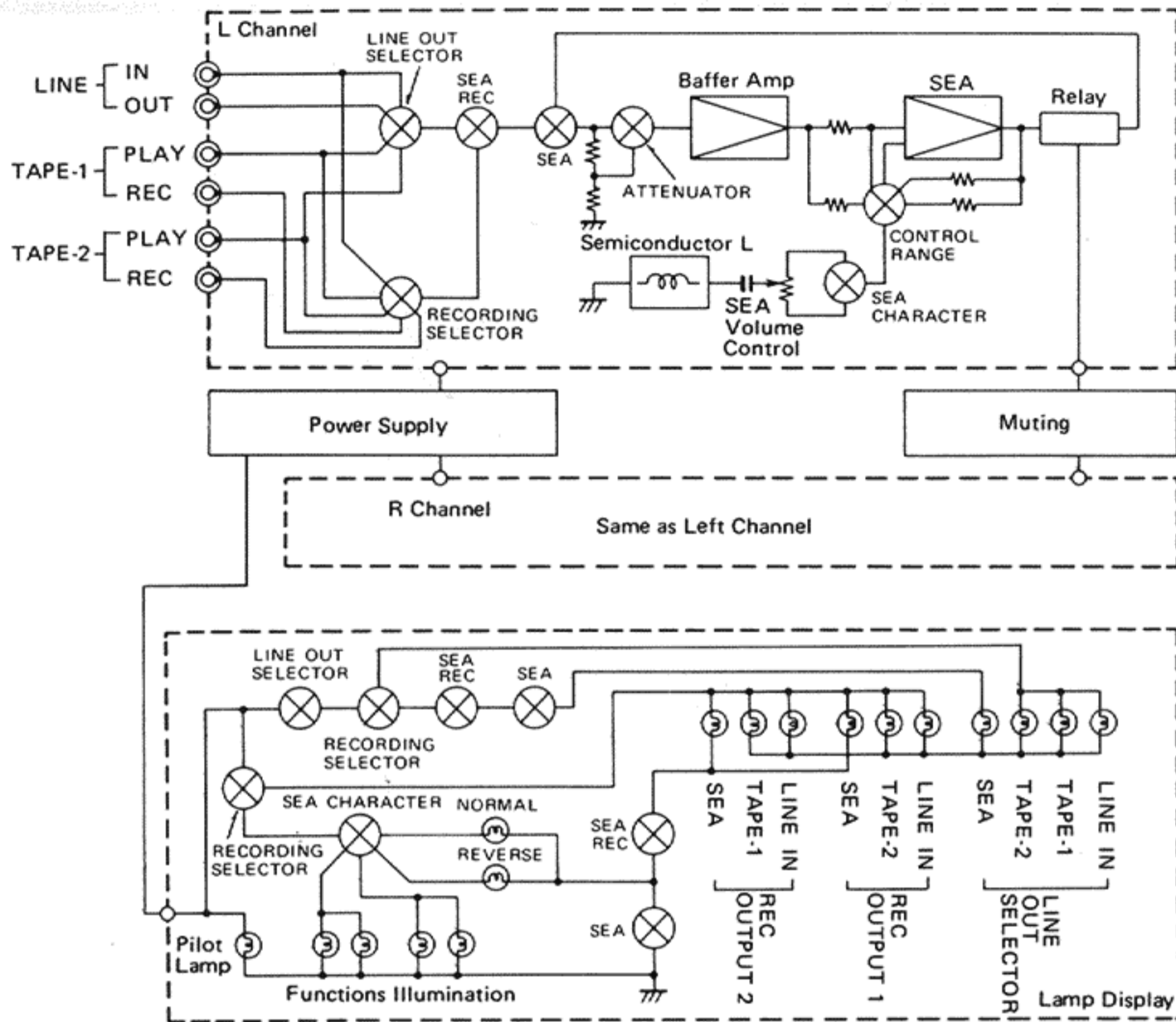


Fig. 6

6. Service Precaution

Switching settings			Output at the OUTPUT terminal			
SEA REC	RECORDING SELECTOR	LINE OUT SELECTOR	LINE OUT TERMINALS	TAPE-1 REC TERMINALS	TAPE-2 REC TERMINALS	
OFF	LINE IN	LINE IN	LINE IN SEA	LINE IN	LINE IN	
		TAPE-1	TAPE-1 SEA	LINE IN	LINE IN	
		TAPE-2	TAPE-2 SEA	LINE IN	LINE IN	
		REC. SOURCE	LINE IN	LINE IN	LINE IN	
	1 ▶ 2	LINE IN	LINE IN SEA	No signal	TAPE-1	TAPE-1
		TAPE-1	TAPE-1 SEA	No signal	TAPE-1	TAPE-1
		TAPE-2	TAPE-2 SEA	No signal	TAPE-1	TAPE-1
		REC. SOURCE	TAPE-1	No signal	TAPE-1	TAPE-1
	2 ▶ 1	LINE IN	LINE IN SEA	TAPE-2	No signal	No signal
		TAPE-1	TAPE-1 SEA	TAPE-2	No signal	No signal
		TAPE-2	TAPE-2 SEA	TAPE-2	No signal	No signal
		REC. SOURCE	TAPE-2	TAPE-2	No signal	No signal
ON	LINE IN	LINE IN	LINE IN	LINE IN SEA	LINE IN SEA	
		TAPE-1	TAPE-1	LINE IN SEA	LINE IN SEA	
		TAPE-2	TAPE-2	LINE IN SEA	LINE IN SEA	
		REC. SOURCE	LINE IN SEA	LINE IN SEA	LINE IN SEA	
	1 ▶ 2	LINE IN	LINE IN	No signal	TAPE-1 SEA	TAPE-1 SEA
		TAPE-1	TAPE-1	No signal	TAPE-1 SEA	TAPE-1 SEA
		TAPE-2	TAPE-2	No signal	TAPE-1 SEA	TAPE-1 SEA
		REC. SOURCE	TAPE-1 SEA	No signal	TAPE-1 SEA	TAPE-1 SEA
	2 ▶ 1	LINE IN	LINE IN	TAPE-2 SEA	No signal	No signal
		TAPE-1	TAPE-1	TAPE-2 SEA	No signal	No signal
		TAPE-2	TAPE-2	TAPE-2 SEA	No signal	No signal
		REC. SOURCE	TAPE-2 SEA	TAPE-2 SEA	No signal	No signal

7. Adjustment Procedures

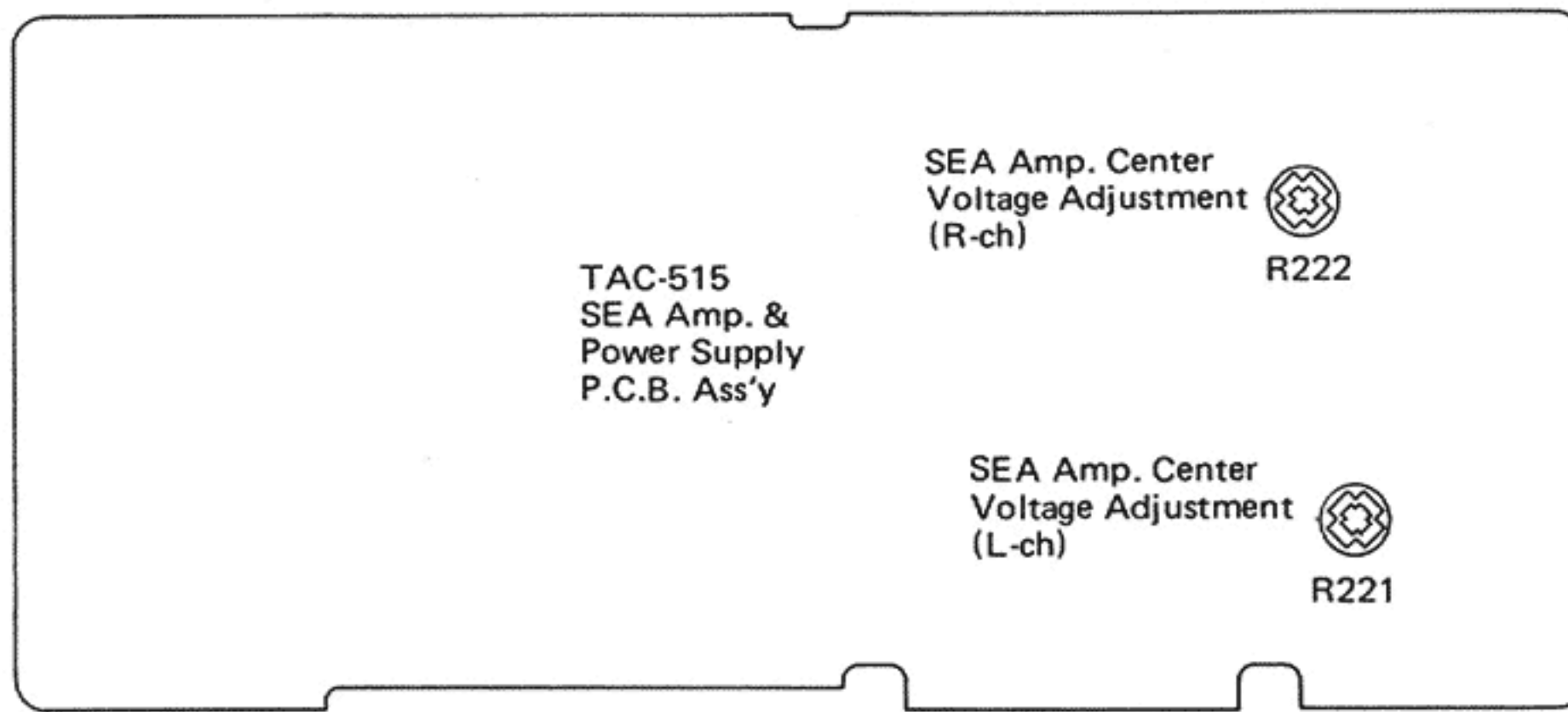


Fig. 7

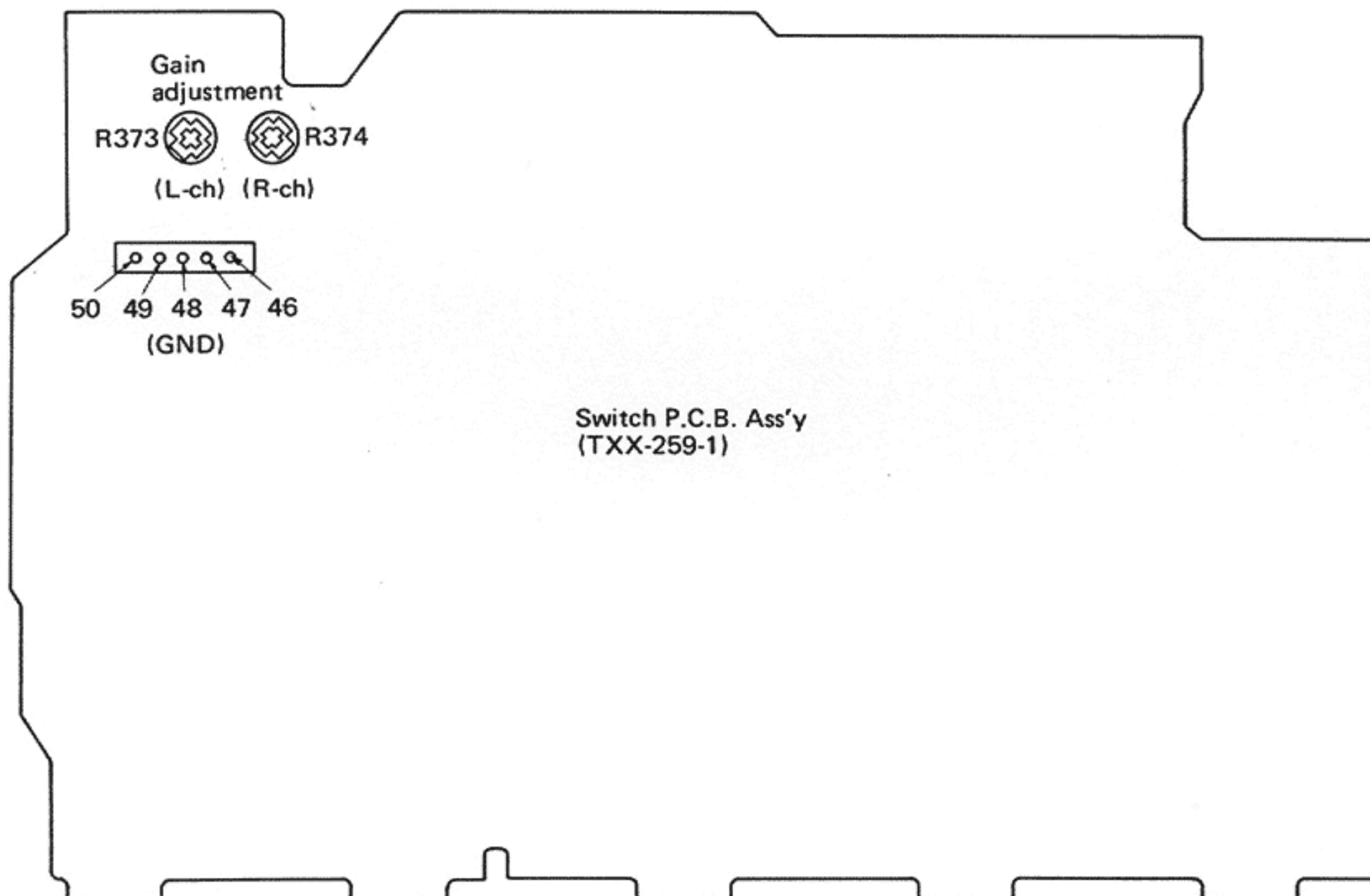


Fig. 8

7-(1) Center Voltage Adjustment

SEA Amplifier Center Voltage Adjustment

Preparation: Employ a DC VTVM with DC 1 mV

	Adjusting point	Measuring test point	Adjustment/ check voltage
L-ch	R221	Between 50 – 48 (ground)	0 V
	Voltage check	Between 49 – 48 (ground)	Normal below ±15 mV
R-ch	R222	Between 47 – 48 (ground)	0 V
	Voltage check	Between 46 – 48 (ground)	Normal below ±15 mV

7-(2) Gain Adjustment

Gain Adjustment

Preparation:

- Set all SEA controls to their central position.
- Set the SEA switch, LINE OUT selector switch and attenuator to "ON", "LINE IN" and "0 dB" respectively.
- Apply the test signal (1 kHz, 0 dBm = 0,775 V) to LINE IN terminal and measure the GAIN at LINE OUT terminal.

	Adjusting point	Adjustment procedure
L-ch	R373	Adjustment should be performed so that the gain with the SEA switch set to ON and DEFEAT are the same.
R-ch	R374	

8. Printed Circuit Board Ass'y and Parts List

8-(1) TXX-259 Functions Switch & Pin-jack P.C.Board Ass'y

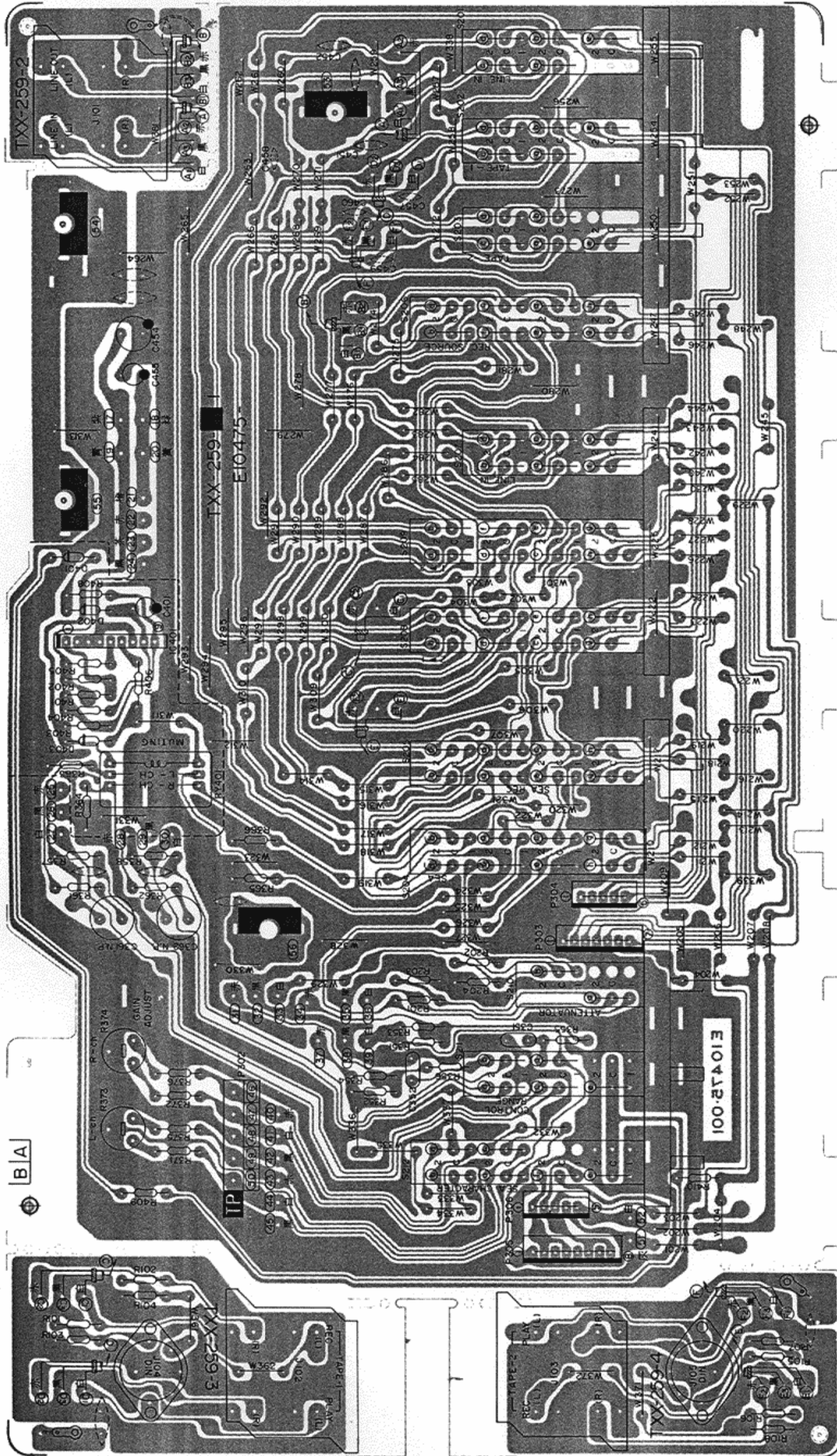


Fig. 9

Note:
The specific symbols (黒, 赤, 茶... etc.) on a surface of P.C. Board are actually unrelated to the repair service and are significant denotement in order to process the proper assembly at the factory.

Each Individual P.C. Board Location

- ① TXX-259B-1 : Switch P.C. Board Ass'y
- ② TXX-259-2 : Pin Jack P.C. Board Ass'y (LINE)
- ③ TXX-259-3 : Pin Jack P.C. Board Ass'y (TAPE-1)
- ④ TXX-259-4 : Pin Jack P.C. Board Ass'y (TAPE-2)

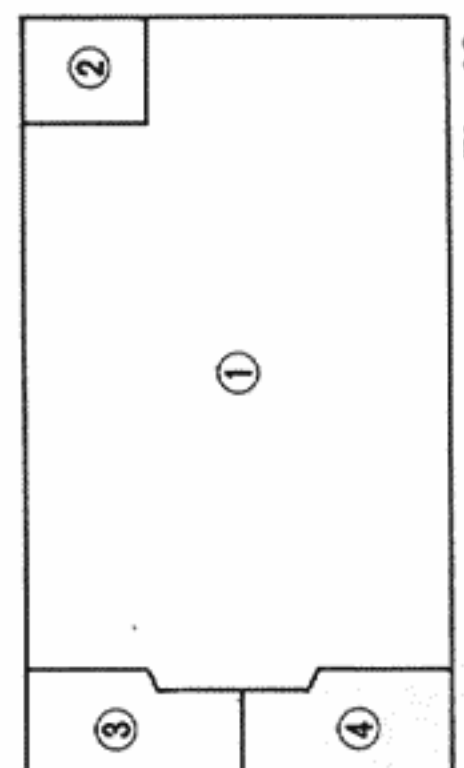


Fig. 10

Integrated Circuit

Item No.	Part Number	Rating		Description	
		Pc			Maker
IC401	TA7317P	0.5 W		I.C.	Toshiba

Diodes

Item No.	Part Number	Rating		Description	
					Maker
D401	IS2076-31			Silicon	Hitachi
D402	IS2076-31			"	"
D403	IS2076-31			"	"

Capacitors

Item No.	Part Number	Rating		Description	
C351	QFM81HK-102	1000 pF	50 V	Mylar	
C352	QFM81HK-102	"	"	"	
C361	QEZ0046-106	10 μ F	"	Electrolytic	
C362	QEZ0046-106	"	"	"	
C401	QET51CR-226	22 μ F	16 V	"	
C451	QCS21HJ-101	100 pF	50 V	Ceramic	
C452	QCS21HJ-101	"	"	"	
C454	QET51ER-107H	100 μ F	25 V	Electrolytic	
C455	QET51HR-106H	10 μ F	50 V	"	

Resistors

Item No.	Part Number	Rating		Description	
R101	QRD141J-334SY	330 k Ω	1/4 W	Carbon	
R102	QRD141J-334SY	"	"	"	
R103	QRD141J-104SY	100 k Ω	"	"	
R104	QRD141J-104SY	"	"	"	
R105	QRD141J-334SY	330 k Ω	"	"	
R106	QRD141J-334SY	"	"	"	
R107	QRD141J-104SY	100 k Ω	"	"	
R108	QRD141J-104SY	"	"	"	
R201	QRD141J-473SY	47 k Ω	"	"	
R202	QRD141J-473SY	"	"	"	
R203	QRD141J-564SY	560 k Ω	"	"	
R204	QRD141J-564SY	"	"	"	
R351	QRD141J-753SY	75 k Ω	"	"	
R352	QRD141J-753SY	"	"	"	
R353	QRD141J-332SY	3.3 k Ω	"	"	
R354	QRD141J-332SY	"	"	"	
R355	QRD141J-821SY	820 Ω	"	"	
R356	QRD141J-821SY	"	"	"	
R357	QRD141J-911SY	910 Ω	"	"	
R358	QRD141J-911SY	"	"	"	
R361	QRD141J-101SY	100 Ω	"	"	
R362	QRD141J-101SY	"	"	"	
R363	QRD141J-183SY	18 k Ω	"	"	
R364	QRD141J-183SY	"	"	"	
R365	QRD141J-223SY	22 k Ω	"	"	

Resistors

Item No.	Part Number	Rating		Description	
R366	QRD141J-223SY	22 k Ω	1/4 W	Carbon	
R371	QRD141J-123SY	12 k Ω	"	"	
R372	QRD141J-123SY	"	"	"	
R373	QVP4A0B-473	47 k Ω		Variable (Carbon)	
R374	QVP4A0B-473	"		"	
R375	QRD141J-123SY	12 k Ω	1/4 W	Carbon	
R376	QRD141J-123SY	"	"	"	
R401	QRD141J-683SY	68 k Ω	"	"	
R402	QRD141J-124SY	120 k Ω	"	"	
R403	QRD141J-153SY	15 k Ω	"	"	
R404	QRD141J-104SY	100 k Ω	"	"	
R405	QRD141J-332SY	3.3 k Ω	"	"	
R406	QRD149J-331S	330 Ω	"	"	
R408	QRD141J-472SY	4.7 k Ω	"	"	
R409	QRD141J-390SY	39 Ω	"	"	
R410	QRD141J-332SY	3.3 k Ω	"	"	

Others

Item No.	Part Number	Rating		Description	
J101 ~ 103	E03591-42D			4 Pin Jack Ass'y	
J104, 105	E3623-003			DIN Scket Ass'y	
J201	EWS015-029			Wire Ass'y	
J301	EWS017-020			"	
J501	EWS015-030			"	
J502	EWS015-031			"	
J601	EWS016-024			"	
P302	E03628-5UD			5 Pin Plug (Test Points)	
P303	QMV5005-007			7 Pin Plug	
P304	QMV5005-005			5 Pin Plug	
P305	QMV5005-008			8 Pin Plug	
P306	QMV5005-005			5 Pin Plug	
RY401	ESK2D12-212			Relay Switch	
S201 ~ 203, 206	E65396-001 QSP0249-052			Ground Plate Line-out Selector	
S204, 205	QSP0229-054			SEA, SEA REC.	
S207 ~ 209	QSP0239-053			Recording Selector	
S210 ~ 212	QSP0239-054			Attenuator, Control Range, SEA Character	

8-(2) TXX-260 S.E.A. Resonator P.C.Board Ass'y

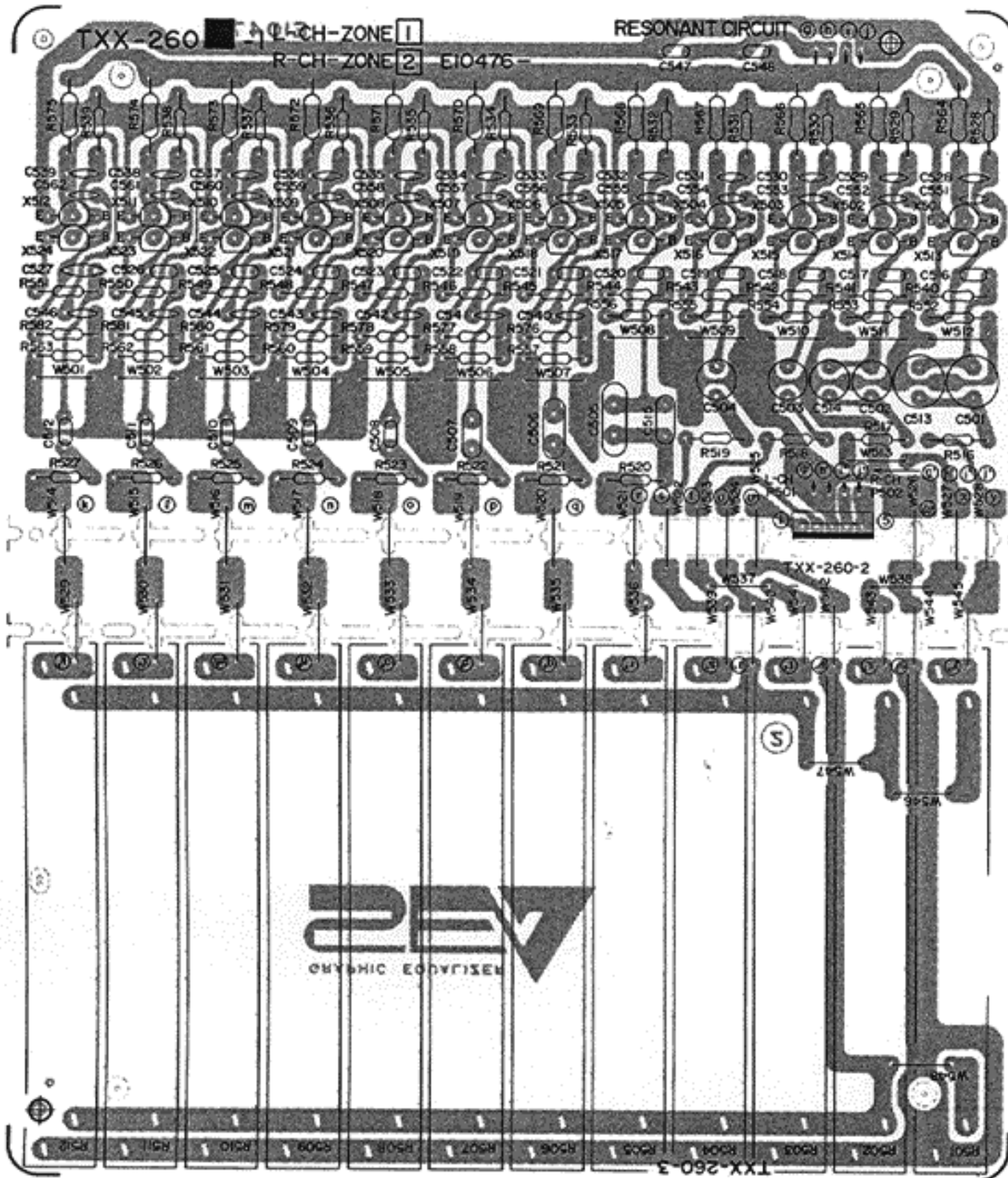
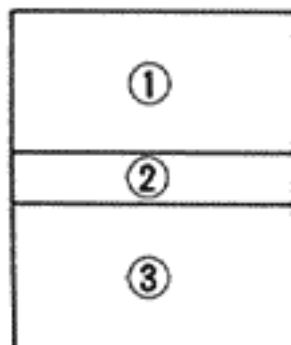


Fig. 11

Each Individual P.C. Board Location



- ① TXX-260B-1 : Resonator P.C. Board Ass'y
- ② TXX-260-2 : -
- ③ TXX-260-3 : Slide Volume P.C. Board Ass'y

Transistors

Item No.	Part Number	Rating		Description	
		Pc	fT	Material	Maker
X501	2SA872AV(D,E)	0.3 W	120 MHz	Silicon	Hitachi
X502	2SA872AV(D,E)	"	"	"	"
X503	2SA872AV(D,E)	"	"	"	"
X504	2SA872AV(D,E)	"	"	"	"
X505	2SA872AV(D,E)	"	"	"	"
X506	2SA872AV(D,E)	"	"	"	"
X507	2SA872AV(D,E)	"	"	"	"
X508	2SA872AV(D,E)	"	"	"	"
X509	2SA872AV(D,E)	"	"	"	"
X510	2SA872AV(D,E)	"	"	"	"
X511	2SA872AV(D,E)	"	"	"	"
X512	2SA872AV(D,E)	"	"	"	"
X513	2SC1775AV(E,F)	"	200 MHz	"	"
X514	2SC1775AV(E,F)	"	"	"	"
X515	2SC1775AV(E,F)	"	"	"	"
X516	2SC1775AV(E,F)	"	"	"	"
X517	2SC1775AV(E,F)	"	"	"	"
X518	2SC1775AV(E,F)	"	"	"	"
X519	2SC1775AV(E,F)	"	"	"	"
X520	2SC1775AV(E,F)	"	"	"	"
X521	2SC1775AV(E,F)	"	"	"	"
X522	2SC1775AV(E,F)	"	"	"	"
X523	2SC1775AV(E,F)	"	"	"	"
X524	2SC1775AV(E,F)	"	"	"	"

Capacitors

Item No.	Part Number	Rating		Description
		Value	Voltage	
C501	QEZ0046-475	4.7 μ F	50 V	Electrolytic
C502	QEZ0046-225	2.2 μ F	"	"
C503	QEZ0046-225	"	"	"
C504	QEZ0046-105	1 μ F	"	"
C505	QFM81HJ-474	0.47 μ F	"	Mylar
C506	QFM81HJ-274	0.27 μ F	"	"
C507	QFM81HJ-124	0.12 μ F	"	"
C508	QFM81HJ-683	0.068 μ F	"	"
C509	QFM81HJ-333	0.033 μ F	"	"
C510	QFM81HJ-183	0.018 μ F	"	"
C511	QFM81HJ-822	8200 pF	"	"
C512	QFM81HJ-472	4700 pF	"	"
C513	QEZ0046-475	4.7 μ F	"	Electrolytic
C514	QEZ0046-225	2.2 μ F	"	"
C515	QFM81HJ-683	0.068 μ F	"	Mylar
C516	QFM81HJ-393	0.039 μ F	"	"
C517	QFM81HJ-223	0.022 μ F	"	"
C518	QFM81HJ-123	0.012 μ F	"	"
C519	QFM81HJ-822	8200 pF	"	"
C520	QFM81HJ-472	4700 pF	"	"
C521	QFM81HJ-272	2700 pF	"	"
C522	QFM81HJ-222	2200 pF	"	"
C523	QFM81HJ-182	1800 pF	"	"
C524	QFM81HJ-152	1500 pF	"	"
C525	QFM81HJ-122	1200 pF	"	"
C526	QFM81HJ-102	1000 pF	"	"
C527	QCS21HJ-561	560 pF	"	Ceramic
C528	QCS21HJ-680	68 pF	"	"
C529	QCS21HJ-680	"	"	"
C530	QCS21HJ-680	"	"	"
C531	QCS21HJ-680	"	"	"
C532	QCS21HJ-680	"	"	"
C533	QCS21HJ-680	"	"	"
C534	QCS21HJ-680	"	"	"
C535	QCS21HJ-680	"	"	"
C536	QCS21HJ-680	"	"	"
C537	QCS21HJ-680	"	"	"
C538	QCS21HJ-680	"	"	"
C539	QCS21HJ-680	"	"	"
C540	QCS21HJ-271	270 pF	"	"
C541	QCS21HJ-221	220 pF	"	"
C542	QCS21HJ-181	180 pF	"	"
C543	QCS21HJ-151	160 pF	"	"
C544	QCS21HJ-121	120 pF	"	"
C545	QCS21HJ-101	100 pF	"	"
C546	QCS21HJ-470	47 pF	"	"
C547	QCF21HP-103	0.01 μ F	"	"
C548	QCF21HP-103	"	"	"

Resistors

Item No.	Part Number	Rating		Description
		Value	Power	
R501	QVT6C2W-815	100 k Ω		Variable (SEA)
R502	QVT6C2W-815	"		"
R503	QVT6C2W-815	"		"
R504	QVT6C2W-815	"		"
R505	QVT6C2W-815	"		"
R506	QVT6C2W-815	"		"
R507	QVT6C2W-815	"		"
R508	QVT6C2W-815	"		"
R509	QVT6C2W-815	"		"
R510	QVT6C2W-815	"		"
R511	QVT6C2W-815	"		"
R512	QVT6C2W-815	"		"
R516	QRD141J-680SY	68 Ω	1/4 W	Carbon
R517	QRD141J-680SY	"	"	"
R518	QRD141J-680SY	"	"	"

Resistors

Item No.	Part Number	Rating	Description
R519	QRD141J-390SY	39 Ω	1/4 W Carbon
R520	QRD141J-820SY	82 Ω	"
R521	QRD141J-820SY	"	"
R522	QRD141J-820SY	"	"
R523	QRD141J-820SY	"	"
R524	QRD141J-820SY	"	"
R525	QRD141J-820SY	"	"
R526	QRD141J-560SY	56 Ω	"
R527	QRD141J-220SY	22 Ω	"
R528	QRD141J-472SY	4.7 kΩ	"
R529	QRD141J-472SY	"	"
R530	QRD141J-472SY	"	"
R531	QRD-141J-472SY	"	"
R532	QRD141J-472SY	"	"
R533	QRD141J-472SY	"	"
R534	QRD141J-472SY	"	"
R535	QRD141J-472SY	"	"
R536	QRD141J-472SY	"	"
R537	QRD141J-472SY	"	"
R538	QRD141J-472SY	"	"
R539	QRD141J-472SY	"	"
R540	QRD141J-471SY	470 Ω	"
R541	QRD141J-471SY	"	"
R542	QRD141J-471SY	"	"
R543	QRD141J-471SY	"	"
R544	QRD141J-471SY	"	"
R545	QRD141J-471SY	"	"
R546	QRD141J-471SY	"	"
R547	QRD141J-471SY	"	"
R548	QRD141J-471SY	"	"
R549	QRD141J-471SY	"	"
R550	QRD141J-471SY	"	"
R551	QRD141J-471SY	"	"
R552	QRD141J-564SY	560 kΩ	"
R553	QRD141J-564SY	"	"

Resistors

Item No.	Part Number	Rating	Description
R554	QRD141J-514SY	510 kΩ	1/4 W Carbon
R555	QRD141J-434SY	430 kΩ	"
R556	QRD141J-334SY	330 kΩ	"
R557	QRD141J-304SY	300 kΩ	"
R558	QRD141J-204SY	200 kΩ	"
R559	QRD141J-104SY	100 kΩ	"
R560	QRD141J-623SY	62 kΩ	"
R561	QRD141J-333SY	33 kΩ	"
R562	QRD141J-203SY	20 kΩ	"
R563	QRD141J-183SY	18 kΩ	"
R564	QRD129J-682	6.8 kΩ	1/2 W
R565	QRD129J-682	"	"
R566	QRD129J-682	"	"
R567	QRD129J-682	"	"
R568	QRD129J-682	"	"
R569	QRD129J-682	"	"
R570	QRD129J-682	"	"
R571	QRD129J-682	"	"
R572	QRD129J-682	"	"
R573	QRD129J-682	"	"
R574	QRD129J-682	"	"
R575	QRD129J-682	"	"
R576	QRD141J-472SY	4.7 kΩ	1/4 W
R577	QRD141J-472SY	"	"
R578	QRD141J-472SY	"	"
R579	QRD141J-472SY	"	"
R580	QRD141J-472SY	"	"
R581	QRD141J-472SY	"	"
R582	QRD141J-182SY	1.8 kΩ	"

Others

Item No.	Part Number	Rating	Description
P501	QMV5005-005 E300796-001		5 pin Plug Fastener

8-(3) TXX-277 AC Socket & Fuse P.C.Board Ass'y

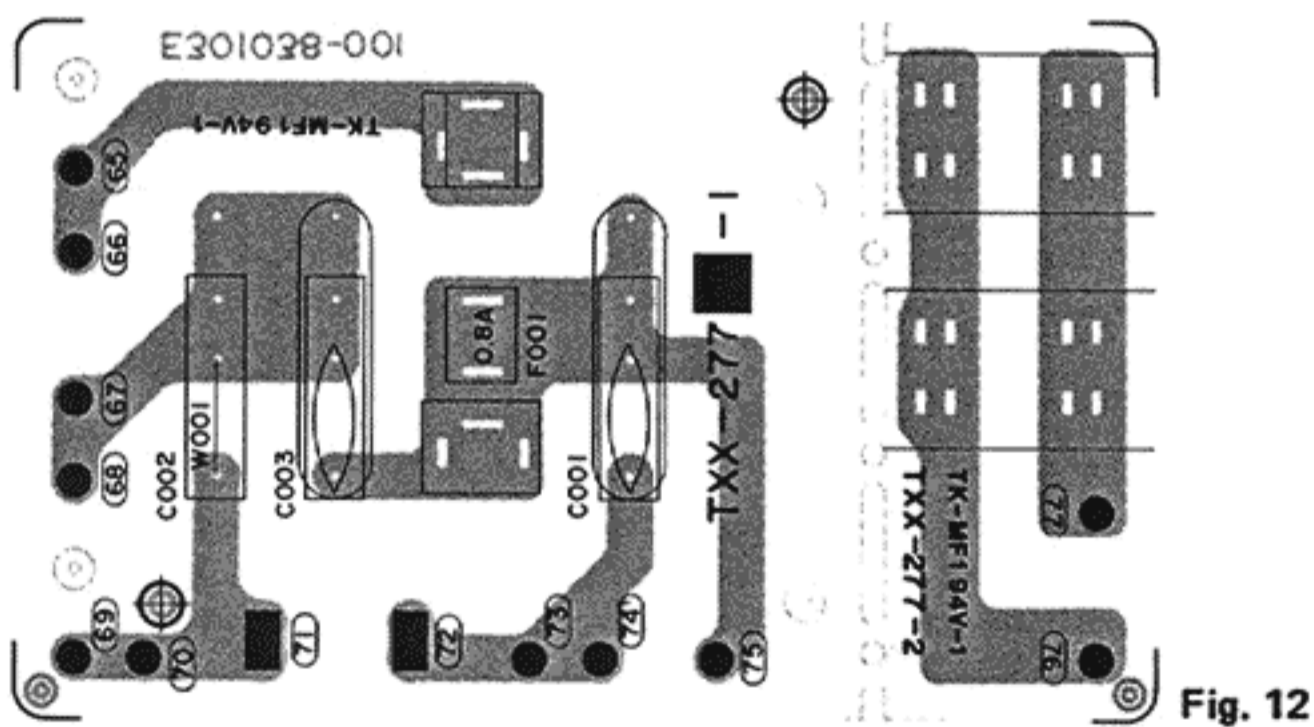
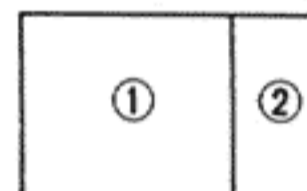


Fig. 12

Capacitors

Item No.	Part Number	Rating	Description
C001	QCZ9014-103A	See page 13.	Ceramic
C001	QFH53BM-103M	"	Metallized Mylar
C001	QFZ9010-103	"	Film
C001	QFZ9010-103BS	"	"

Each Individual P.C. Board Location



- ① TXX-277□-1 : AC Fuse P.C. Board Ass'y
② TXX-277-2 : AC Socket P.C. Board Ass'y

Note:

In should be indicated an area code according to the table shown below when placing an order.

Designated Areas	P.C. Board Ass'y
U.S.A. & Canada	TXX-277B-1
All Other Countries	TXX-277C-1
Europe & Australia	TXX-277D-1
U.K.	TXX-277EBS-1

Others

Item No.	Part Number	Rating	Description
J001	QMC0231-003		AC Socket
J002	QMC0231-003		"
	E43727-001		Tab
	E43727-002		"
	E45524-002		Fuse Clip (J, C)
	E48965-002		Fuse Clip (U, P, E, A, BS)
	E65508-002		Tab

8-(4) TAC-515 Power Supply & S.E.A. Amp. P.C.Board Ass'y

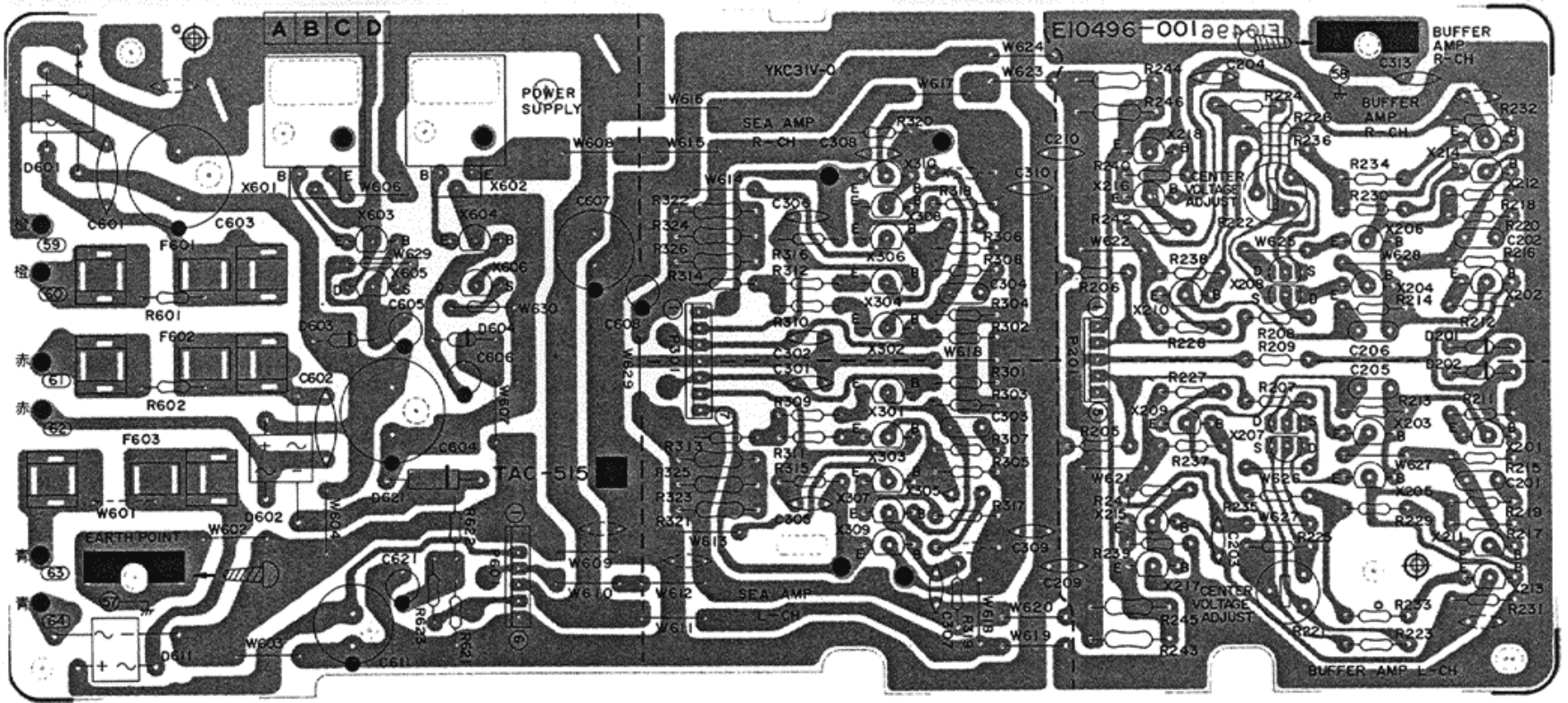


Fig. 13

Each Individual P.C. Board Location

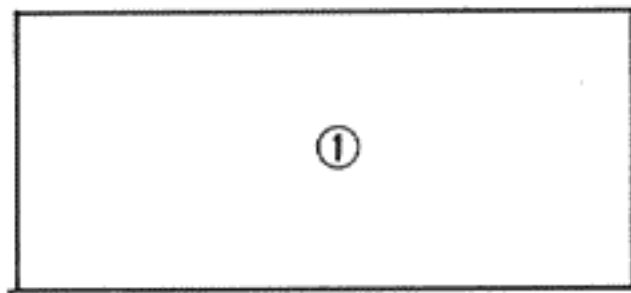


Fig. 14

① TAC-515 □ : Power Supply & SEA Amp. P.C. Board Ass'y

Note (1):

In □ should be indicated an area code according to the table shown below when placing an order.

Designated Areas	P.C. Board Ass'y
U.S.A. & Canada	TAC-515 B
All other countries	TAC-515 C

Note (2):

The specific symbols (赤, 黒, 白, ... etc.) on a surface of P.C. Board are actually unrelated to the repair service and are significant denotement in order to process the proper assembly at the factory.

Transistors

Item No.	Part Number	Rating		Description	
		Pc	fT		Maker
X201	2SA872AV(D,E)	0.3 W	120 MHz	Silicon	Hitachi
X202	2SA872AV(D,E)	"	"	"	"
X203	2SC1775AV(E,F)	"	200 MHz	"	"
X204	2SC1775AV(E,F)	"	"	"	"
X205	2SC1775AV(E,F)	"	"	"	"
X206	2SC1775AV(E,F)	"	"	"	"
X207	2SK106W(C)	"	"	F.E.T.	"
X208	2SK106W(C)	"	"	"	"
X209	2SC1775AV(E,F)	"	200 MHz	Silicon	"
X210	2SC1775AV(E,F)	"	"	"	"
X211	2SC458(C,D)	0.2 W	230 MHz	"	"
X212	2SC458(C,D)	"	"	"	"
X213	2SC458(C,D)	"	"	"	"
X214	2SC458(C,D)	"	"	"	"
X215	2SA872AV(D,E)	0.3 W	120 MHz	"	"
X216	2SA872AV(D,E)	"	"	"	"
X217	2SC2229(O,Y)	0.8 W	"	"	Toshiba
X218	2SC2229(O,Y)	"	"	"	"
X301	2SC1775AV(F1)	0.3 W	200 MHz	"	Hitachi
X302	2SC1775AV(F1)	"	"	"	"
X303	2SC1775AV(F1)	"	"	"	"
X304	2SC1775AV(F1)	"	"	"	"
X305	2SA872AV(D,E)	"	120 MHz	"	"
X306	2SA872AV(D,E)	"	"	"	"
X307	2SA872AV(D,E)	"	"	"	"

Transistors

Item No.	Part Number	Rating		Description	
		Pc	fT		Maker
X308	2SA872AV(D,E)	0.3 W	120 MHz	Silicon	Hitachi
X309	2SC2229(O,Y)	0.8 W	"	"	Toshiba
X310	2SC2229(O,Y)	"	"	"	"
X601	2SD313V(E)	30 W	8 MHz	"	Sanyo
X602	2SB507V(E)	"	"	"	"
X603	2SC1775AV(E,F)	0.3 W	200 MHz	"	Hitachi
X604	2SA872AV(D,E)	0.3 W	120 MHz	"	"
X605	2SK105(F)	0.25W	"	F.E.T.	NEC
X606	2SK105(F)	"	"	"	"

Diodes

Item No.	Part Number	Rating	Description	
				Maker
D201	1S2076-31		Silicon	Hitachi
D202	1S2076-31		"	"
D601	ESAB03-02A		"	Fuji
D602	ESAB03-02A		"	"
D603	RD18EB3		"	NEC
D604	RD33EB3		"	"
D611	ESAB03-02A		"	Fuji
D621	ERB12-02RKL1		"	"

Capacitors

Item No.	Part Number	Rating		Description
C201	QFM81HK-122	1200 pF	50 V	Mylar
C202	QFM81HK-122	"	"	"
C203	QCS21HJ-330	33 pF	"	Ceramic
C204	QCS21HJ-330	"	"	"
C205	QFM81HK-103	0.01 μ F	"	Mylar
C206	QFM81HK-103	"	"	"
C209	QCF21HP-103	"	"	Ceramic
C210	QCF21HP-103	"	"	"
C301	QCS21HJ-121	120 pF	"	"
C302	QCS21HJ-121	"	"	"
C303	QFM81HK-222	2200 pF	"	Mylar
C304	QFM81HK-222	"	"	"
C305	QCS21HJ-221	220 pF	"	Ceramic
C306	QCS21HJ-221	"	"	"
C307	QCS21HJ-101	100 pF	"	"
C308	QCS21HJ-101	"	"	"
C309	QCF21HP-103	0.01 μ F	"	"
C310	QCF21HP-103	"	"	"
C313	QCF21HP-103	"	"	"
C601	QCE22HP-103	"	500 V	"
C602	QCE22HP-103	"	"	"
C603	QET51VR-108H	1000 μ F	35 V	Electrolytic
C604	QET51HR-108H	"	50 V	"
C605	QET51ER-106H	10 μ F	25 V	"
C606	QET51HR-106H	"	50 V	"
C607	QET51ER-477H	470 μ F	25 V	"
C608	QET51HR-106H	10 μ F	50 V	"
C611	QET50JR-228H	2200 μ F	6.3 V	"
C621	QET51HR-105H	1 μ F	50 V	"

Resistors

Item No.	Part Number	Rating		Description
R231	QRD141J-152SY	1.5 k Ω	1/4 W	Carbon
R232	QRD141J-152SY	"	"	"
R233	QRD141J-471SY	470 Ω	"	"
R234	QRD141J-471SY	"	"	"
R235	QRD141J-333SY	33 k Ω	"	"
R236	QRD141J-333SY	"	"	"
R237	QRD141J-103SY	10 k Ω	"	"
R238	QRD141J-103SY	"	"	"
R239	QRD141J-151SY	150 Ω	"	"
R240	QRD141J-151SY	"	"	"
R241	QRD141J-273SY	27 k Ω	"	"
R242	QRD141J-273SY	"	"	"
R243	QRD129J-682	6.8 k Ω	1/2 W	"
R244	QRD129J-682	"	"	"
R245	QRD129J-682	"	"	"
R246	QRD129J-682	"	"	"
R301	QRD141J-105SY	1 M Ω	1/4 W	"
R302	QRD141J-105SY	"	"	"
R303	QRD141J-103SY	10 k Ω	"	"
R304	QRD141J-103SY	"	"	"
R305	QRD141J-103SY	"	"	"
R306	QRD141J-103SY	"	"	"
R307	QRD141J-101SY	100 Ω	"	"
R308	QRD141J-101SY	"	"	"
R309	QRD141J-330SY	33 Ω	"	"
R310	QRD141J-330SY	"	"	"
R311	QRD141J-330SY	"	"	"
R312	QRD141J-330SY	"	"	"
R313	QRD141J-393SY	39 k Ω	"	"
R314	QRD141J-393SY	"	"	"
R315	QRD141J-332SY	3.3 k Ω	"	"
R316	QRD141J-332SY	"	"	"
R317	QRD141J-681SY	680 Ω	"	"
R318	QRD141J-681SY	"	"	"
R319	QRD141J-103SY	10 k Ω	"	"
R320	QRD141J-103SY	"	"	"
R321	QRD129J-682	6.8 k Ω	1/2 W	"
R322	QRD129J-682	"	"	"
R323	QRD129J-682	"	"	"
R324	QRD129J-682	"	"	"
R325	QRD129J-682	"	"	"
R326	QRD129J-682	"	"	"
R601	ERD149J-2R2S	2.2 Ω	1/4 W	"
R602	ERD149J-2R2S	"	"	"
R621	QRD141J-223SY	22 k Ω	"	"
R622	QRD149J-220S	22 Ω	"	"
R623	QRD141J-472SY	4.7 k Ω	"	"

Resistors

Item No.	Part Number	Rating		Description
R205	QRD141J-513SY	51 k Ω	1/4 W	Carbon
R206	QRD141J-513SY	"	"	"
R207	QRD141J-100SY	10 Ω	"	"
R208	QRD141J-100SY	"	"	"
R209	QRD141J-473SY	47 k Ω	"	"
R211	QRD141J-272SY	2.7 k Ω	"	"
R212	QRD141J-272SY	"	"	"
R213	QRD141J-682SY	6.8 k Ω	"	"
R214	QRD141J-682SY	"	"	"
R215	QRD141J-272SY	2.7 k Ω	"	"
R216	QRD141J-272SY	"	"	"
R217	QRD141J-272SY	"	"	"
R218	QRD141J-272SY	"	"	"
R219	QRD141J-221SY	220 Ω	"	"
R220	QRD141J-221SY	"	"	"
R221	QVP4A0B-101	100 Ω		Variable
R222	QVP4A0B-101	"		"
R223	QRD141J-271SY	270 Ω	1/4 W	Carbon
R224	QRD141J-271SY	"	"	"
R225	QRD141J-271SY	"	"	"
R226	QRD141J-271SY	"	"	"
R227	QRD141J-392SY	3.9 k Ω	"	"
R228	QRD141J-392SY	"	"	"
R229	QRD141J-471SY	470 Ω	"	"
R230	QRD141J-471SY	"	"	"

Others

Item No.	Part Number	Rating	Description
F601	E67132-TR50		250 V T 500 mA
F602	E67132-TR50		"
F603	E67132-T1R0		250 V T 1A
P201	QMV5005-005		5 Pin Plug
P301	QMV5005-007		7 Pin Plug
P601	QMV5005-006		6 Pin Plug
	E43727-002		Tab
	E48965-002		Fuse Clip (U, P, E, A, BS)
	E65396-001		Earth Plate
L	SPSP3008M		Screw
	E61537-002		Heat Sink
S	E61537-001		"

9. Accessories List

PART NO.	PART NAME	Q'TY
E03479-001B	Signal Cord	2
E41202-2	Envelope	1
E30580-817A	Instruction Book	1
BT20032B	Warranty Card (U.S.A. and U.S. Military Market)	1
BT20025C	Warranty Card (Canada)	1
BT20029B	Warranty Card (Australia)	1
BT-20013C	Warranty Card (U.K.)	1
BT20042	Special Replay Card (U.S.A. and Others)	1
E35497-001 or E35497-002 or E35497-003 or E35497-004	Caution Sheet (U.S. Military Market and Others)	1
E35497-003	Caution Sheet (Europe)	1
E35497-004	Caution Sheet (Australia and U.K.)	1

10. Packing Materials

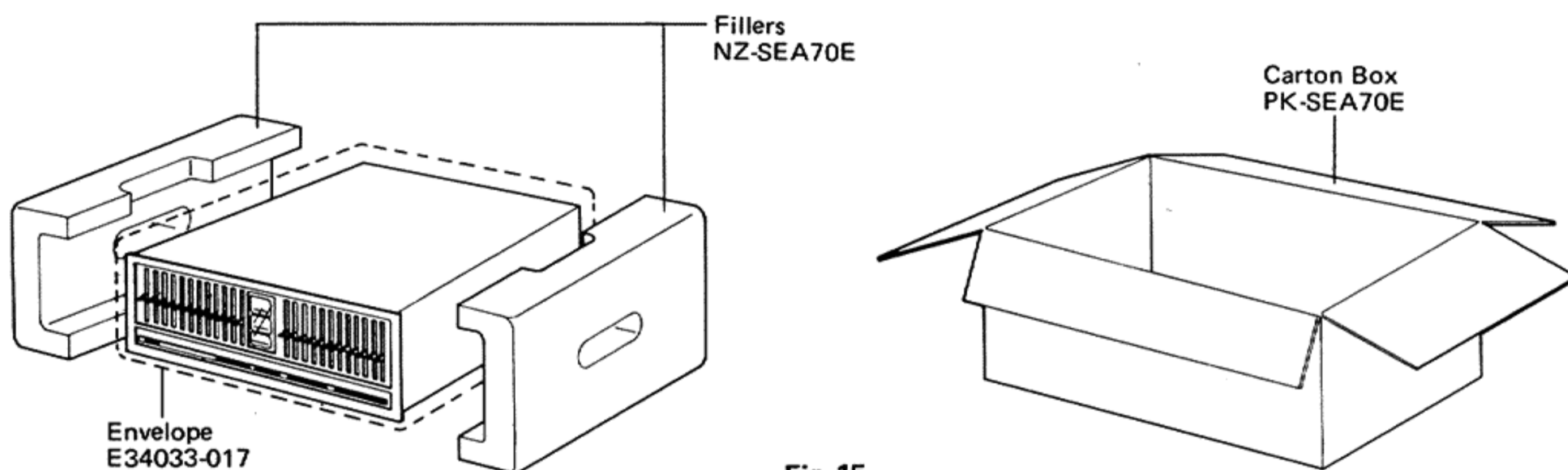
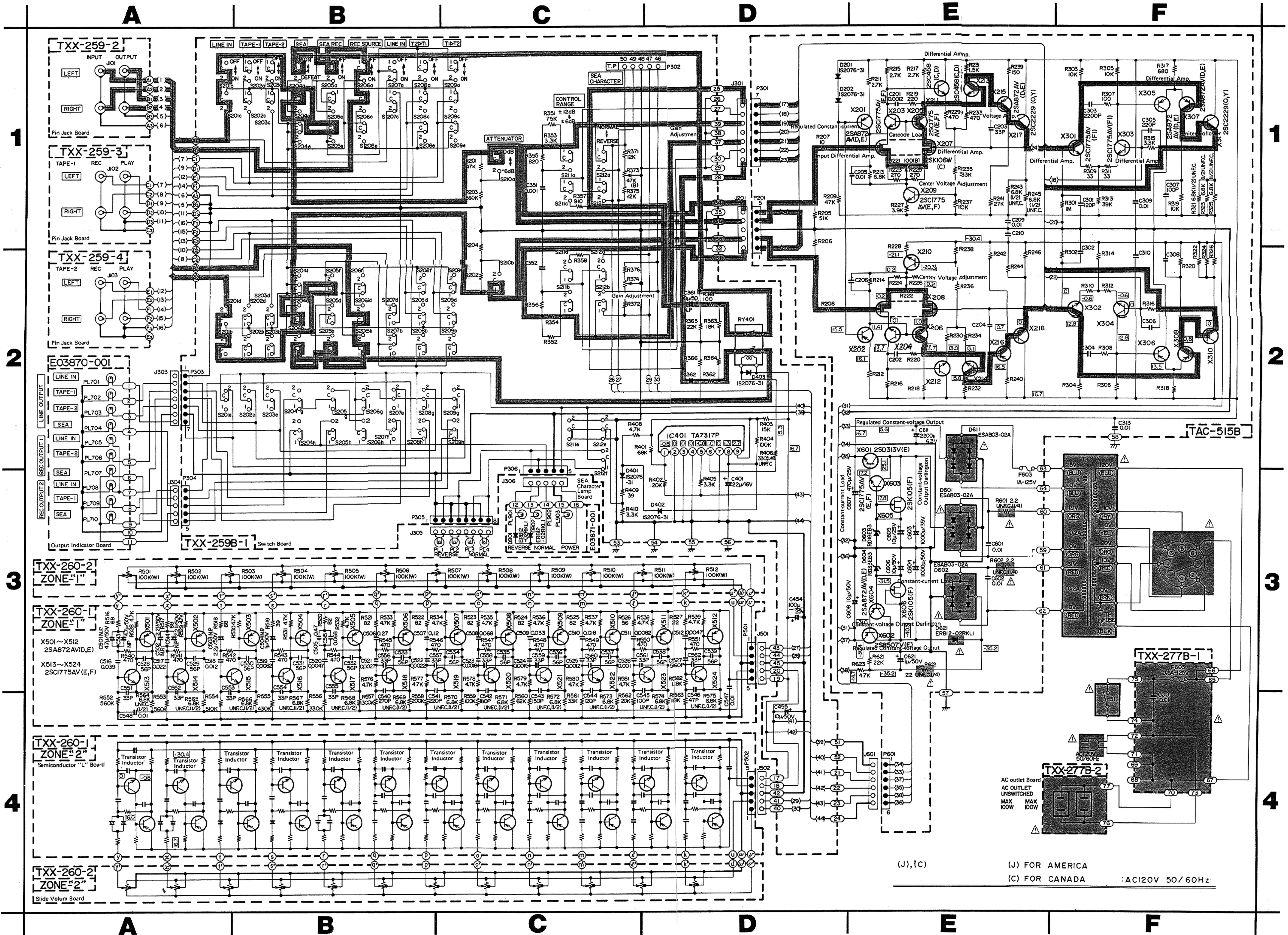


Fig. 15

11. Parts List with Specified Numbers for Designated Areas

Description	U.S.A. Canada	U.S. Military Market & Other Countries	Europe	Australia	U.K.
Power Switch	SO-225M	QSP1110-305	QSP1110-305	QSP1110-305	QSP1110-305BS
Power Cord	QMP1200-200	QMP7600-250	QMP3900-200	QMP2560-244	QMP9017-008BS
Fuse (Primary) (F001)	QMF61U1-R50 (0.5 A)	QMF51A2-R315L (T315 mA)	QMF51A2-R315L (T315 mA)	QMF51A2-R315L (T315 mA)	QMF51A2-R315LBS (T315 mA)
Fuse (Secondary) (F601, F602)	—	QMF51A2-R50L (T500 mA)	QMF51A2-R50L (T500 mA)	QMF51A2-R50L (T500 mA)	QMF51A2-R50LBS (T500 mA)
Fuse (Secondary) (F603)	QMF61U1-1R0 (1.0 A)	QMF51A2-1R0L (T1 A)	QMF51A2-1R0L (T1 A)	QMF51A2-1R0L (T1 A)	QMF51A2-1R0LBS (T1 A)
Switch Bypass Capacitor (C001)	QCZ9014-103A	QFH53BM-103M	QFZ9010-103	QFZ9010-103	QFZ9010-103BS
AC Socket	QMC0231-003	QMC0231-003	—	—	—
Mask Plate	—	—	E65494-003	E65494-003	E65494-003
Voltage Selector Mask Plate	E67451-001	—	—	—	—
AC Primary Fuse P.C. Board Ass'y	TXX-277B-1	TXX-277C-1	TXX-277D-1	TXX-277D-1	TXX-277EBS-1
AC Socket P.C. Board Ass'y	TXX-277-2	TXX-277-2	—	—	—
Power Supply & SEA Amp. P.C. Board Ass'y	TAC-515B	TAC-515C	TAC-515C	TAC-515C	TAC-515C
Switch Cover	—	—	E67520-001	E67520-001	E67520-001

12. SEA-70 Schematic Diagram



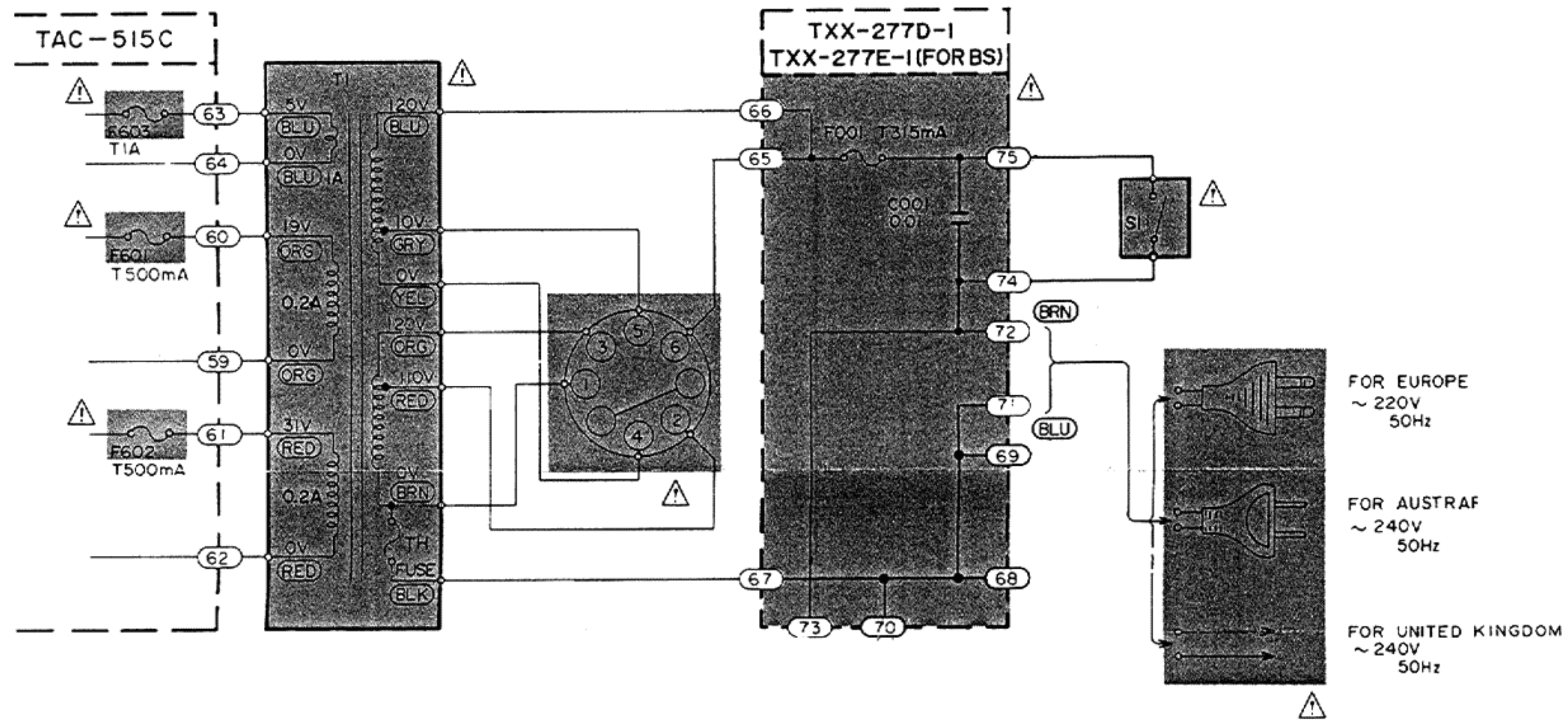
- Notes:**
1. Voltage values in \square are positive.
 2. Voltage values in \square are negative.
 3. — indicates positive B power supply.
 4. — indicates negative B power supply.
 5. ■ indicates signal path.
 6. When replacing the parts in the darkened area (■) and those marked with Δ , be sure to use the designated parts to ensure safety.
 7. This is the standard circuit diagram.
The design and contents are subject to change without notice.

Printed Circuit Board Ass'y Locations

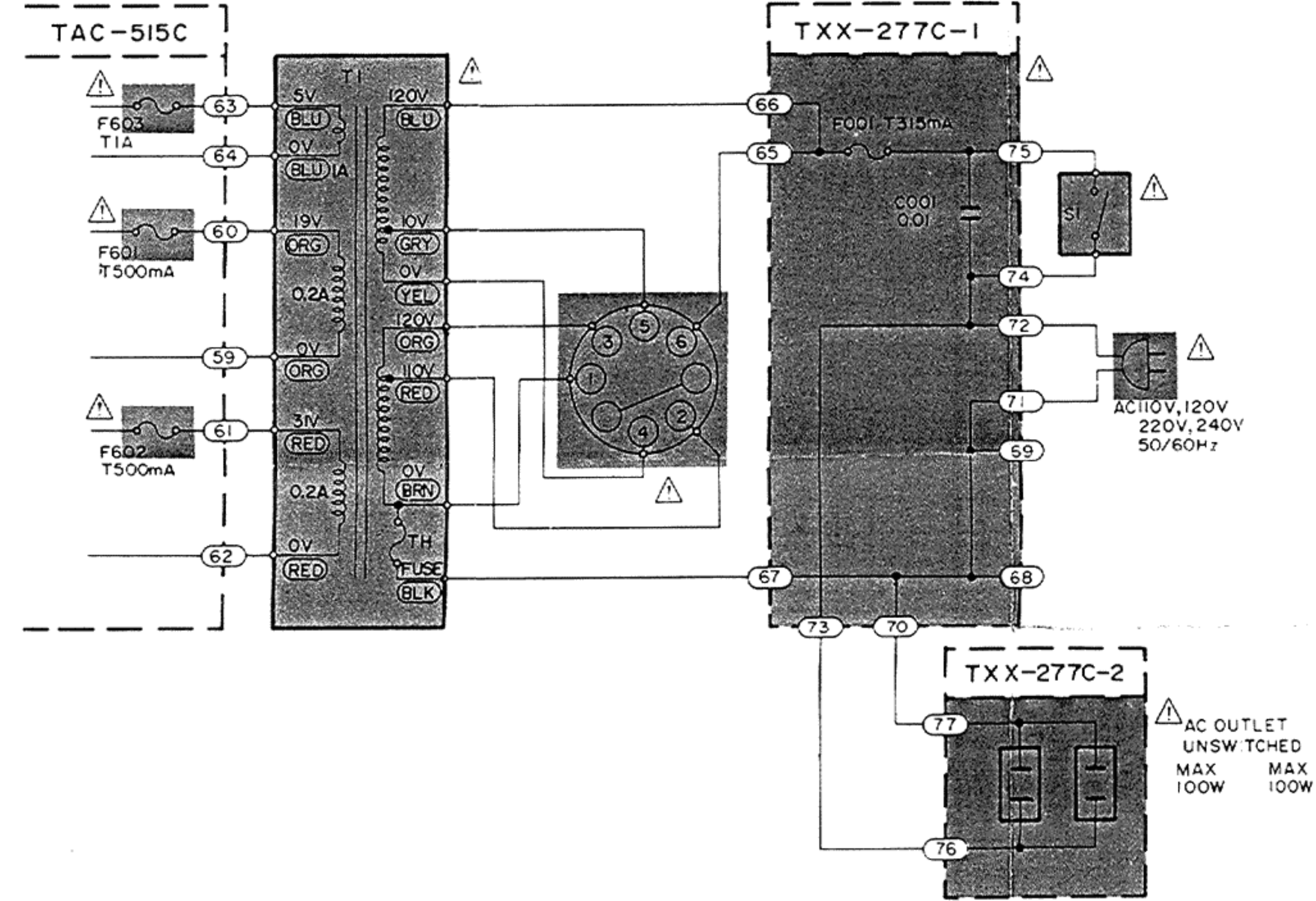
P.C. Board Ass'y	Description	Page
TXX-259	Functions Switch & Pin-jack P.C. Board Ass'y	7
TXX-260	S.E.A. Resonator P.C. Board Ass'y	9
TXX-277	AC Socket & Fuse P.C. Board Ass'y	10
TAC-515	S.E.A. & Power Supply P.C. Board Ass'y	11

(J), (C)
 (J) FOR AMERICA
 (C) FOR CANADA
 AC120V 50/60Hz

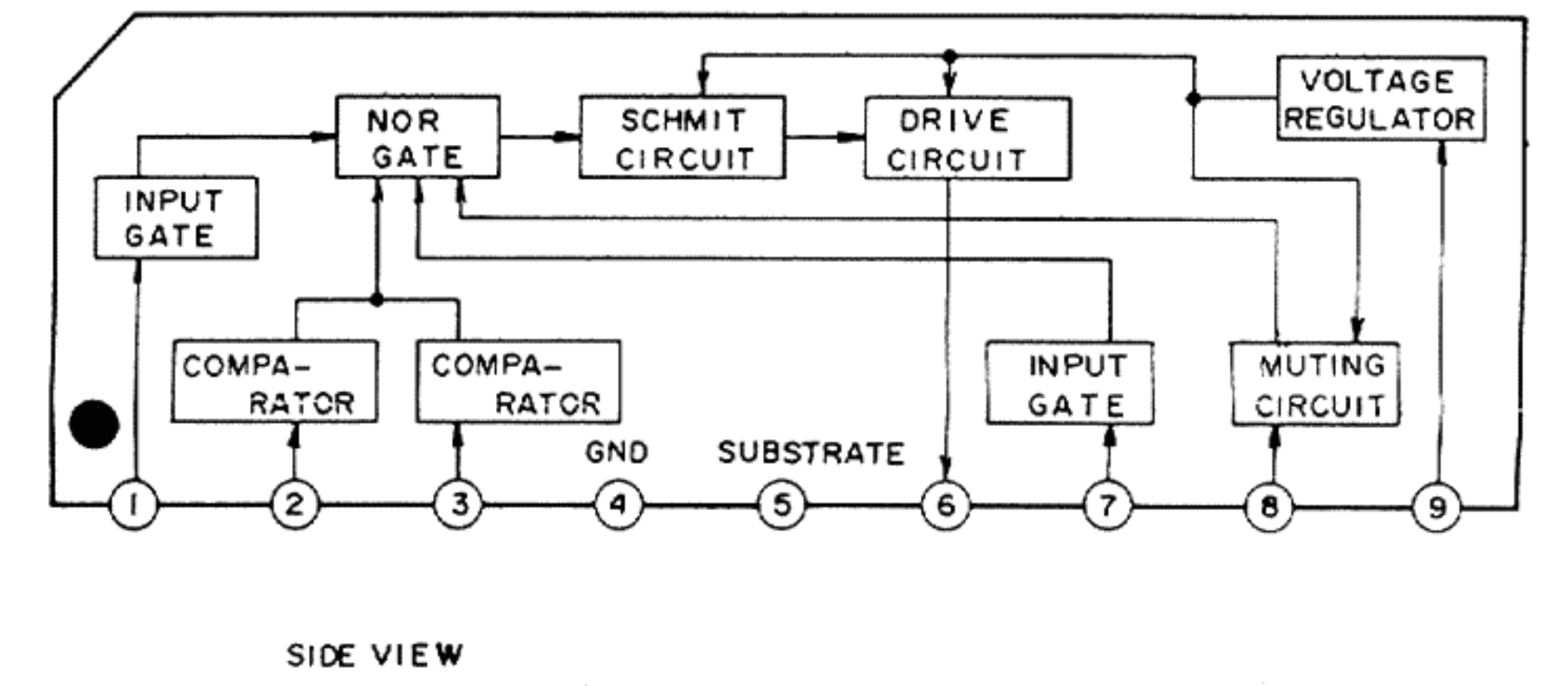
(E), (A), (BS) (E) FOR EUROPE : ~220V, 50Hz
 (A) FOR AUSTRARIA : ~240V, 50Hz
 (BS) FOR U.K. : ~240V, 50Hz



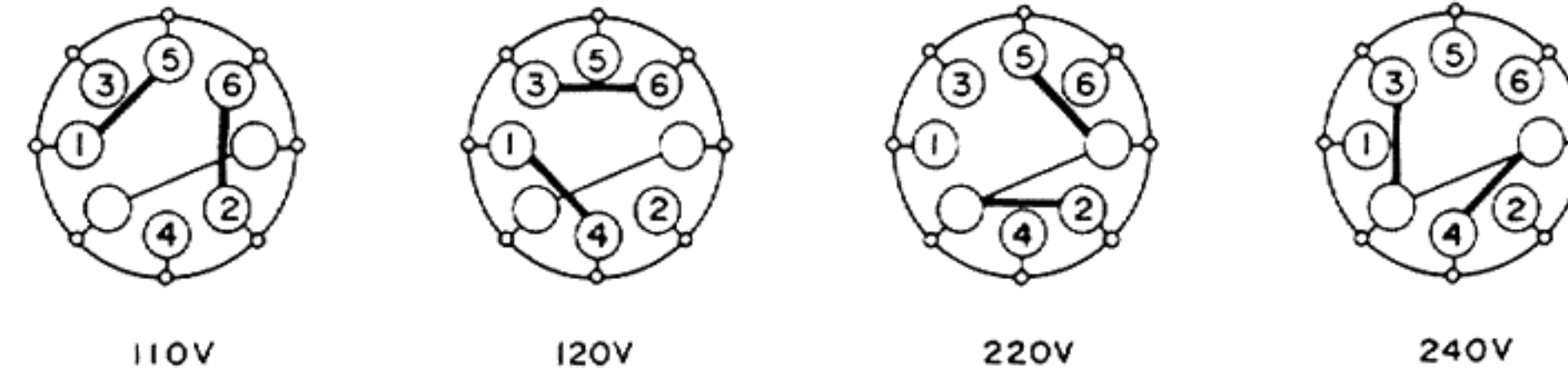
(U), (P) (U) FOR OTHER COUNTRIES
 (P) FOR PACEX



TA7317P

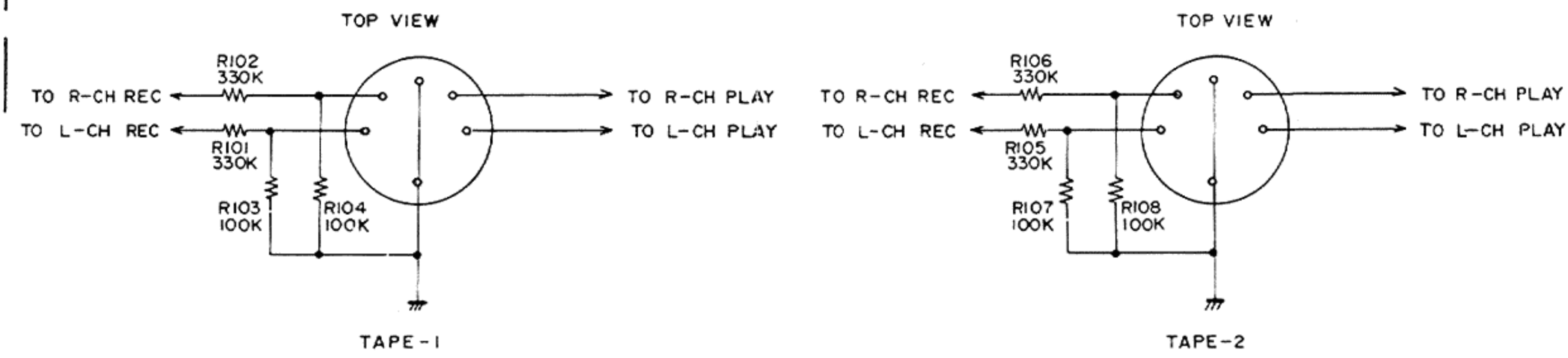


VOLTAGE SELECTOR CONNECTION

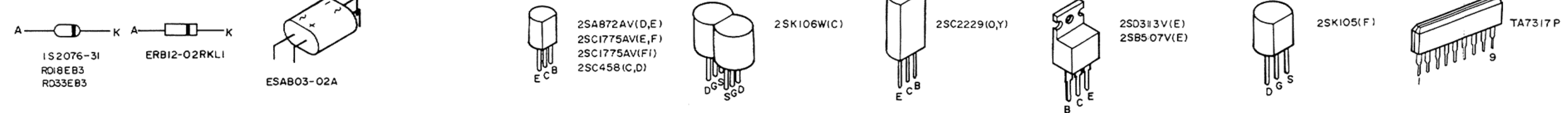


DIN CONNECTOR

ATTACHED TO (U), (C), (E), (A), (BS), (U), (P) TYPE MODEL



TRANSISTOR, IC AND DIODE LEAD IDENTIFICATION



13. Connection Diagram

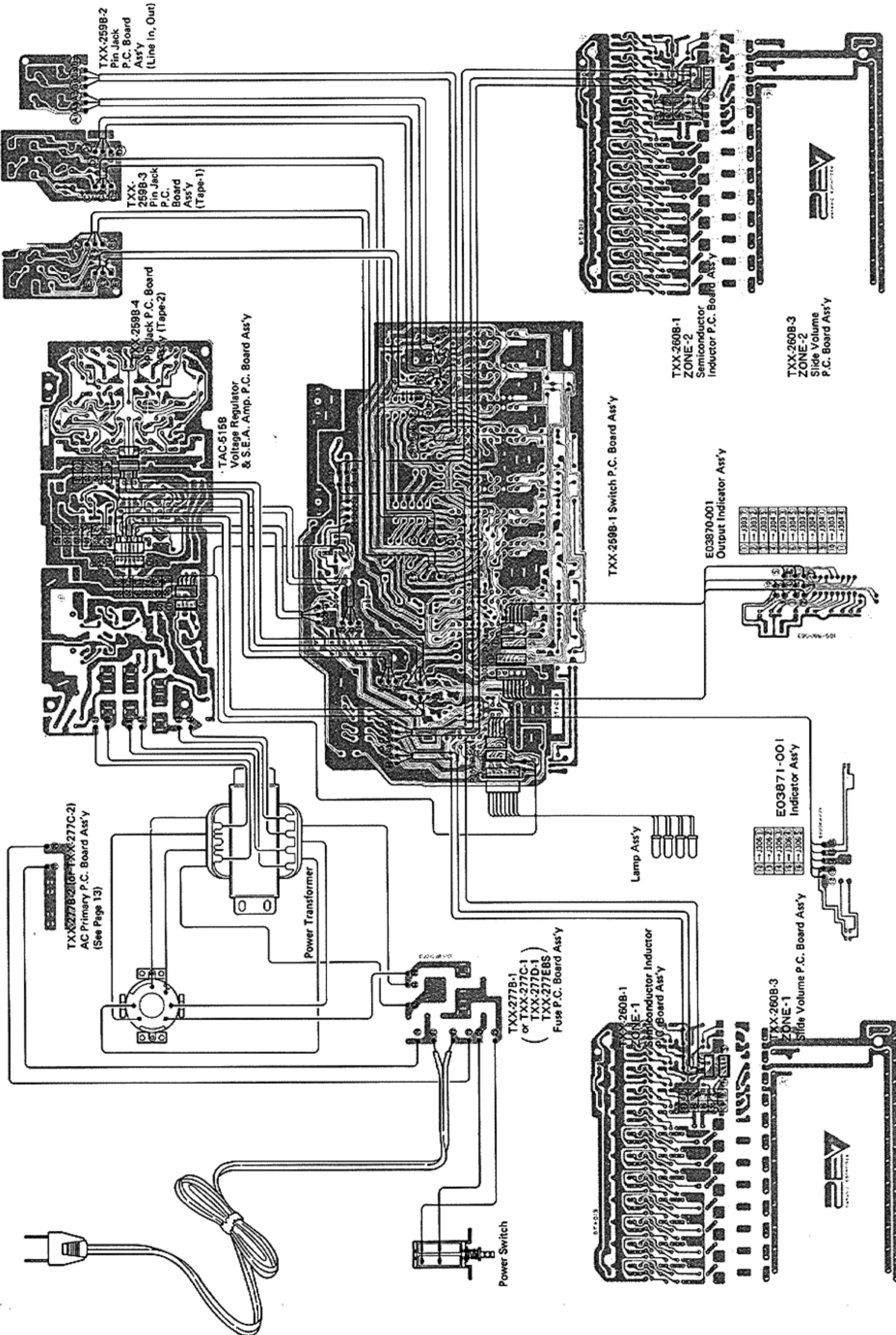



Fig. 16

JVC

VICTOR COMPANY OF JAPAN, LIMITED, TOKYO, JAPAN

 Printed in Japan
7012-V